

## PATENT ABSTRACTS OF JAPAN

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(71)Applicant : ICHINOKURA:KK

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(72)Inventor : NINCHIYOUJI AKITSUGU

IWAMOTO TOMOKO

HOSHI YASUKO

KIKUCHI TOMOKO

(54) SPARKLING LOW ALCOHOLIC REFINED SAKE AND PRODUCTION THEREOF

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a sparkling low alcoholic refined sake having a thin turbidity and a refreshing feeling, and excellent in flavor, and to provide a method for producing the same.

SOLUTION: This sparkling low alcoholic refined sake is produced by saccharifying and fermenting a steamed rice with a rice koji (malted rice) in the presence of a polyacid to prepare an unrefined sake in a state of a low alcohol content, then filtering a part of the unrefined sake by a filtering material having a coarse mesh for separating a turbid liquid containing yeasts and having a fermenting activity, compressing another part of the unrefined sake to separate a clear liquid, mixing the turbid liquid with the clear liquid and putting into a bottle, and stopping the fermentation at the time when the gas pressure attains 2-5 kg/cm<sup>2</sup> caused by the fermentation at the inside of the bottle.

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to fizz low alcoholic sake with little muddiness, and its manufacture approach.

[0002]

[Description of the Prior Art] It is also called mature industry and a sake detached building of a consumer, especially a young man is said, and a sake manufacture is long and is in the situation that consumptive elongation is not seen. The industry is raised and diversification of goods is attained in order to overthrow such a situation, and it is striving for need development.

[0003] There are some which are shown in JP,61-47179,A and JP,7-79674,B under such a background as the manufacture approach of conventional fizz sake. That is, after rough-\*\*(ing) mash, it seals in a container and it is fermented, when internal gas pressure reaches a fixed pressure, fermentation is suspended, and fizz sake is manufactured.

[0004] Moreover, there are some which are shown in JP,3-11758,B as the manufacture approach of low alcoholic conventional sake. That is, saccharification and fermentation are performed under multi-acid existence, and they are a stop and the thing which carries out an upper tub and manufactures low alcoholic sake about fermentation in the range of low alcoholic concentration.

[0005]

[Problem(s) to be Solved by the Invention] However, conventional fizz sake had the trouble that paying the image of general sake could not be finished, for unrefined sake. Moreover, low alcoholic conventional sake had the trouble that paying the image of traditional sake could not be finished in respect of invigoration.

[0006] By having been made paying attention to such a conventional trouble, muddiness is thin, and this invention has invigoration, and it aims at offering the fizz low alcoholic sake which was excellent in the flavor, and its manufacture approach.

[0007]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, the manufacture approach of the fizz low alcoholic sake concerning this invention Under multi-acid existence, saccharify, ferment steaming rice and rice malt, and a part of mash of the condition of low alcoholic concentration is filtered with a filtering medium with a coarse eye. The muddiness liquid which has fermentation activity including yeast is separated, the other sections of said mash are squeezed, founding liquid is separated, it seals in the container after mixing said muddiness liquid and said founding liquid, and gas pressure is 2-5kg/cm<sup>2</sup> by the fermentation inside a container. When it becomes, it is characterized by stopping fermentation.

[0008] It is desirable to start kindling in a furnace after sealing in a container, especially by the manufacture approach of the fizz low alcoholic sake concerning this invention, when whenever [ 4 - 6% and sake ] is [ -70--90 and acidity ] 3-4 for alcoholic concentration.

[0009] In this invention, saccharification and fermentation may be divided and may be performed. In this invention, even if "the bottom of multi-acid existence" is in the phase of mash at the 1 time, the condition that acidity may exceed 3.5 is said. In addition, acidity is 0.1Ns. It is NaOH titratable acidity. In this invention, low alcoholic concentration means 10% or less of alcoholic concentration. A setup of the acid by brewing combination and saccharification power, temperature management, and management of fermentation days can adjust the alcoholic concentration of mash.

[0010] As for the mixed rate of muddiness liquid and founding liquid, 10-30 are desirable one pair from a viewpoint of a turbidity, whenever [ foaming ], and, a flavor. A filter cloth and others can be used for a filtering medium. The gas pressure in the container by fermentation is the viewpoint of harmony with a flavor to 2-5kg/cm<sup>2</sup>. It is set as the range. In the case of 6 degrees C - 10 degrees C, the fermentation temperature and the fermentation period inside a container have five days - two desirable weeks. Inaugural-kindling temperature has the viewpoint of whenever [ foaming ], and a flavor to 60 degrees C - desirable 65 degrees C. By making temperature low, a halt of fermentation may be performed by inactivating yeast, or inaugural kindling may perform it.

[0011] The fizz low alcoholic sake concerning this invention is fizz low alcoholic sake sealed by the container, and is characterized by the extinction values -70--90 and whose acidity whenever [ 4 - 6% and sake ] is [ the gas pressure in a

container ] 3-4,660nm for 2-5kg/cm<sup>2</sup> and alcoholic concentration being 0.2-2.0. This fizz low alcoholic sake is the manufacture approach of the fizz low alcoholic sake concerning above-mentioned this invention, and can use for and manufacture the thing of 160-210 meshes to a filtering medium.

[0012]

[Function] The mash of sake with a flavor and flavor excellent in low alcoholic concentration is made by saccharifying and fermenting steaming rice and rice malt under multi-acid existence. The muddiness liquid which has fermentation activity including the yeast which filtered a part of the mash with the filtering medium with a coarse eye, and the founding liquid which squeezed the other sections of mash and was separated are mixed, and it seals in a container. Thereby, fermentation progresses inside a container, although muddiness is thin, there is invigoration by fizz and the sake which was excellent in the flavor is made. As for the manufactured sake, invigoration and a flavor harmonize. Especially the thing of 3-4 has [ whenever / sake / -70--90 and acidity ] invigoration and the flavor nature optimal [ alcoholic concentration ] 4 to 6%. Moreover, when the extinction value of 660nm drinks up the thing of the range of 0.2-2.0 by the glass tumbler, muddiness is not attached to the wall surface.

[0013]

[Example] 800ml of lactic acids was added in 181l. of water, association No. 901 yeast and 5kg of rice malt, and 95kg of steaming rice were added to this, and mash was taught at the temperature of about 40 degrees C.

[0014] A part of mash on the 10th was filtered through the filter cloth of about 160-210 meshes after this teaching, and the remainder of mash was applied to the squeezer. The become muddy and according to liquid and squeezing founding liquid filtered through this filter cloth was mixed, and water was added in order to adjust a component. Bottling of this is carried out to the bottle of glass with a capacity of 300ml, it maintained at the temperature of 6 degrees C - 10 degrees C, and it was fermented. The gas pressure in a bottle in the case of 10 degrees C is 2-5kg/cm<sup>2</sup>. When it became, it maintained at the temperature of -5 degrees C, and fermentation was stopped. \*\* SU \*\* was measured with the gas pressure plan. - After storing for five days at 5 degrees C, kindling was started in a furnace at 60 degrees C - 65 degrees C. In this way, fizz low alcoholic sake was manufactured.

[0015] The organoleptic test was conducted about the manufactured fizz low alcoholic sake. Inspection was conducted by the 11 expert panelist about the manufactured fizz low alcoholic sake and five commercial foaming sake a total of six points. Evaluation turned down the trade name, attached the number of 1-6 from the desirable order of a flavor, and showed it by a panelist's average. The result is shown in Table 1.

[0016]

[Table 1]

	A社	B社	C社	D社	E社	実施例
タイプ	本醸造	純米	純米	本醸造	純米	純米
容量 (ml)	180	300	300	300	360	300
アルコール濃度	12.6%	5.2%	6.0%	14.3%	17.9%	5.1%
日本酒度	+4.5	-45.0	-18.5	+4.5	+10.0	-77.5
酸度	1.10	1.90	2.79	1.69	2.00	3.90
アミノ酸度	0.40	0.61	0.25	0.65	1.15	0.30
評価	2.3	5.0	4.5	3.3	4.9	1.1

[0017] When Table 1 is seen, evaluation of the fizz low alcoholic sake of an example is the highest, and it turns out that it excels in flavor nature. In addition, it asked for the coefficient of concordance W of Kendall (Kendall), and the consistency of evaluation was examined. Consequently, the consistency multiplier W became significant at 1% of level of significance, and advanced coincidence was accepted in decision of a panelist.

[0018] Moreover, the turbidity was measured about the fizz low alcoholic sake of the example which conducted the organoleptic test, and five commercial foaming sake a total of six points. The turbidity measured the extinction value of 660nm using the spectrophotometer (trade name: Shimazu spectrophotometer-for-ultraviolet-and-visible-region UV-

160A), and expressed it with ranking. In addition, in the severe thing of muddiness, it measured by diluting. The result is shown in Table 2.

[0019]

[Table 2]

	A社	B社	C社	D社	E社	実施例
希釈倍率	5倍	10倍	10倍	無希釈	無希釈	無希釈
吸光値(660nm)	1.684	1.332	1.937	—	—	1.100
濁り順位	3	2	1	透明	透明	4

[0020] The turbidity of the fizz low alcoholic sake of an example was the 4th among six points, and its muddiness was the thinnest in the thing of 10% or less of low alcoholic concentration as Table 2 showed. In the thing of B company and C company, when it drank up by the glass tumbler, muddiness adhered to the wall surface, but in the fizz low alcoholic sake of an example, when it drank up by the glass tumbler, muddiness was not attached to a wall surface.

[0021]

[Effect of the Invention] According to the manufacture approach of the fizz low alcoholic sake concerning this invention, muddiness is thin, taste is smooth, over a throat is good, the outstanding flavor and invigoration can harmonize and the fizz low alcoholic sake which has a feeling of transparence also visually can be manufactured. According to the manufacture approach of the fizz low alcoholic sake concerning this invention, unlike the thing of the image of general traditional sake, rising \*\*\*\*\* can manufacture the sake new type which makes champagne consider. Although [ a present-day young man ] the effervescent drinks over a fresh throat are liked in the low alcohol represented in Biel, he can expect a need expansion centering on a youth layer by development of such fizz low alcoholic sake.

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[Translation done.]